

REMARKS/ARGUMENTS

Claims 1-17 remain in this application.

In response to the Office Action of August 24, 2007, Applicant requests re-examination and reconsideration of this application for patent pursuant to 35 U.S.C. 132.

The Examiner's Office Action dated 8/24/07 indicated that the Applicant's amendment necessitated new grounds of rejection as justification in making said Office Action final. With all due respect, Applicant believes this is improper as the grounds for rejection were copied word for word from the first action and therefore the Examiner did not apply new grounds of rejection.

Rejection under 35 USC 103(a)

In the Action, Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mangione et al. (6,585,738) in view of Assaker et al. (6,652,525; cited by applicant).

The Examiner indicates the following claim limitations are met by Mangione et al.; A rigid spinal fixation plate 4 comprising ends 8, 10 that are wider than an intermediate length 6 (see Figs. 1 and 7). The intermediate length is asymmetrically connected to the ends. There are two holes 46, 48 at each end. The holes have a countersunk depression 50, 52 with a continuous sidewall connected to a bottom wall. A plurality of bone screws 12, 14 with enlarged

heads 22, 32 engage the bottom of the holes. The screws have an internal diameter, a leading end with flutes, and are configured for engagement with vertebral bone (see col. 2, lines 40-44 and 59-61). The countersunk holes comprise adjustable, diverging axes (see Figs. 1 and 2). The plate is curved (see Fig. 5).

The Examiner states that Mangione et al. disclose the claimed invention except for a slot between the distal and proximal surfaces and slidable screw locks in the slots and depressions.

The Examiner states that Assaker et. al. disclose a spinal plate 1 comprising a slot 26a between distal and proximal surfaces and slidable screw locks 22 within the slots and depressions in order to prevent the screws from backing out, without increasing the size of the plate, and to improve the reliability and safety of the device (see, e.g., Figs. 1-6 and col. 1, line 11 - col. 2, line 7).

The Examiner states that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the spinal plate of Mangione et al. with a slot between distal and proximal surfaces of the plate and with slidable screw locks within the slots and depressions of Assaker et al., in order to prevent the screws from backing out, without increasing the size of the plate, and to improve the reliability and safety of the device. The Examiner adds that the locks comprise extensions,

e.g. 25, that pass through portions of the ends of the device whereat the locks are removable.

The Applicant respectfully disagrees with the Examiner's determination that the invention as claimed is obvious. In order for an Examiner to establish a prima facie case of obviousness, three basic criteria must be met (MPEP 2142). First there must be some suggestion or motivation, either in the references themselves or the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references) when combined must teach or suggest all of the claimed limitations.

Mangione et al discloses a backbone osteosynthesis system for anterior fixing. Magione et al includes first and second arms which receive bone screws and an adjustable longitudinal plate for rigidly linking the arms. The device however does not provide a mechanism for locking the screws in place thereby preventing the possibility of the screws backing out of the bone.

The Examiner has cited Assaker et al for it's showing of "... a spinal plate 1 comprising a slot 26a between distal and proximal surfaces and slidable screw locks 22 within the slots and depressions in order to prevent the screws from backing out, without increasing the size of the plate, and to improve the

reliability and safety of the device...". In contrast, the slot of the present invention, as amended, recites that said slot in the first end and said second end each have a slot between said proximal and said distal surfaces, said slot in the first end and said slot in the second end each forming a cavity having a thickness length and width, wherein each said length and width are defined by substantially planar upper and lower surfaces, said upper and lower surfaces being substantially parallel to said proximal and distal surfaces, the dimension of said thickness of each said slot being less than the dimension of said length of each said slot, and the dimension of said thickness of each said slot being less than the dimension of said width of each said slot, each of said slots extending through said sidewall of each of said depressions. The slot of Assaker et al is open at both the proximal and distal surfaces and very clearly does not disclose an enclosed cavity between the two surfaces as presently claimed. The Applicant directs the Examiner's careful attention to newly amended claims 1 and 12 which more clearly define this feature. The utilization of a slot formed completely within the bone plate provides a unique, simple, sturdy, and cost effective construction that also results in the reduction of the overall profile of the plate.

In regard to Claim 2, the Applicant respectfully disagrees that Magione et al and Assaker et al disclose a plate "wherein said longitudinal axis of each said screw hole and each depression on said first end diverges from said longitudinal axis of each said screw hole on the first end and each said screw hole and each said depression on said second end diverges from said longitudinal axis of each said screw hole on the second end."

In regard to Claim 6, the Applicant respectfully disagrees that Magione et al and Assaker et al disclose an implant "wherein said slot in said first end and said second end extends through a side wall formed between said proximal and distal surfaces of said first end and said second end, said screw lock is in the form of an elongated body with a narrow central extension formed between two longitudinal slots, said extension passing through said side wall whereby said screw lock may be removed."

In regard to Claim 13, the Applicant respectfully disagrees that Magione et al and Assaker et al disclose "A spinal stabilization system wherein said plurality of screw holes and each said depressions have a longitudinal axis through said plate, said longitudinal axis of said plurality of screw holes on said first end diverging from said longitudinal axis of one another said longitudinal axis of said plurality of screw holes on said second end diverging from said longitudinal axis of one another"

In regard to Claim 14, applicant's screws 11 have a number of flutes, 25, in the side wall dividing the proximal circumference into segments 26. This feature produces a cutting or sweeping function in the bone-screw interface by collecting debris as the screw is inserted to provide a smooth bore in the bone for the following threads. Magione et al and Assaker et al are silent with respect to this feature which is set forth in claim 14.

Claim 16 calls for the extension to pass through a side wall of the plate wherein the side wall connects the proximal and distal surfaces. In the Outstanding Office Action the Examiner has again read flange 25 of Assaker et al on applicant's claimed extension which slidably passes through the first and second end whereby said screw lock may be removed. The invention as now claimed, is distinguished over the structure disclosed by Assaker et al.

It is further noted that Assaker et al lacks any teaching regarding flange 25 in the context of removing the lock from the plate.

SUMMARY

In light of the foregoing remarks and amendments, it is respectfully submitted that the Examiner will now find the claims of the application allowable. Favorable reconsideration of the application is courteously requested.


Respectfully submitted,

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